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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,651	06/30/2003	Robert B. O'Hara JR.	6561/53767	2025
30505 7590 07/12/2007 LAW OFFICE OF MARK J. SPOLYAR 2200 CESAR CHAVEZ STREET SUITE 8 SAN FRANCISCO, CA 94124			EXAMINER CHAN, SAI MING	
			ART UNIT 2616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/611,651

Applicant(s)

O'HARA ET AL.

Examiner

Sai-Ming Chan

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-5, 8, 12, 14-15, 18 and 25-27** are rejected under 35 U.S.C. 102(e) as being anticipated by **Whelan et al. (U.S. Patent Publication # 20040198220)**.

Consider **claims 1 and 25**, Whelan et al. clearly disclose and show an apparatus for use in a wireless network (paragraph 10 (wireless network)) environment and enabling a directed association (paragraph 10 (association control list)) of wireless clients to one of a plurality of wireless network access devices (paragraph 10 (plurality of BSSIDs)), comprising

Art Unit: 2609

a transmit/receive unit (paragraph 2, lines 8-12(access point)) for wireless communication (paragraph 2, lines 12-16(wireless LAN)) with at least one remote client element (paragraph 2, lines 8-12(mobile unit)),

a network interface (paragraph 4, lines 1-4 (access points)) for communication with devices over a wired computer network (paragraph 4, lines 1-4 (wired LAN)),

wherein the apparatus is operative to:

receive an association request (fig. 2a (50 (initiate association), paragraph 120s)) from a remote client element;

compute a set of allowable wireless network access devices (fig. 1 (36 (MU association list))) with which the remote client element may associate;

transmit an association response (paragraph 13 (provide a response)) to the remote client element,

wherein the association response identifies at least one of the wireless network access devices (paragraph 17, lines 1-10 (access point wirelessly transmit an association control list)) in the computed set of allowable wireless network access devices;  
and

establish and maintain, in an access point mode (paragraph 17, lines 1-10(access point)), wireless connections with remote client elements (paragraph 17, lines 1-10(wireless devices)) to bridge wireless traffic between the remote client elements and the computer network (paragraph 17, lines 1-10(MU->AP->LAN->computers)).

Consider **claim 2**, and **as applied to claim 1 above**, Whelan et al. clearly disclose and show an apparatus wherein the wireless network access devices are access points (paragraph 17, lines 1-10(access point)).

Consider **claim 3**, and **as applied to claim 1 above**, Whelan et al. clearly disclose and show an apparatus wherein the wireless network access devices are access elements in a wireless network system including hierarchical processing of protocol information (paragraph 4 (ESS (extended service set) protocol)).

Consider **claims 4 and 26**, and **as applied to claims 1 and 25 above**, respectively, Whelan et al. clearly disclose and show an apparatus wherein the at least one wireless network access device transmitted in the association response is identified by wireless MAC address (paragraph 6 (BSSID = MAC of access point)).

Consider **claim 5 and 27**, and **as applied to claims 4 and 26 above**, respectively, Whelan et al. clearly disclose and show an apparatus wherein the at least one wireless network access device is further identified by BSSID (paragraph 6 (BSSID = MAC of access point)).

Consider **claim 8**, and **as applied to claim 1 above**, Whelan et al. clearly disclose and show an apparatus wherein the association request from the wireless client includes at least one wireless network access device (fig. 2a(51(detect APs))) detected by the wireless client.

Consider **claim 12**, Whelan et al. clearly disclose and show a wireless network system (paragraph 10 (wireless network)) enabling a directed association mechanism (paragraph 10 (association control list)), comprising

a plurality of access elements (paragraph 10 (plurality of BSSIDs)) for wireless communication with at least one remote client element (paragraph 2, lines 8-12(mobile unit)) and for communication with a central control element;

a central control element (fig.1(10 & 12), ) for supervising at least one of said access elements,

wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements; and

wherein the access elements are each operative to:

receive an association request (fig. 2a (50 (initiate association), paragraph 120s)) from a remote client element;

transmit the association request (paragraph 13(request form mobile device)) to a corresponding central control element;

receive an association response (fig. 2(26->20->12 & 10);paragraph

13)from the central control element; and

transmit the association response (paragraph 13 (provide a response)) to the remote client element;

wherein the central control element is operative to:

receive, via an access element, an association request (fig. 2(26->20->12 & 10); paragraph 13) from a remote client element;

compute a set of allowable access elements (fig. 1 (16 (association lists)), paragraph 44) with which the remote client element may associate;

transmit an association response (fig. 2(26->20->12 & 10);paragraph 13) to the remote client element via an access element, wherein the association response identifies at least one of the access elements (paragraph 17, lines 1-10 (access point wirelessly transmit an association control list)) in the computed set of allowable access elements.

For **claim 14**, and **as applied to claim 12 above**, Whelan et al., clearly disclose and show the system, wherein that at least one access element transmitted in the the system , wherein that at least one access element association response is identified by wireless MAC address (paragraph 6 (BSSID = MAC of access point)).

For **claim 15**, and **as applied to claim 14 above**, Whelan et al., clearly disclose and show the system, wherein that at least one access element is further identified by BSSID (paragraph 6 (BSSID = MAC of access point)).

Art Unit: 2609

Consider **claim 18**, and **as applied to claim 12 above**, Whelan et al. clearly disclose and show an apparatus wherein the association request from the wireless client includes at least one wireless network access device (fig. 2a(51(detect APs))) detected by the wireless client.

**Claims 30-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kostic et al. (U.S. Patent Publication # 20030139197)**.

Consider **claim 30**, Kostic et al., clearly disclose and show a wireless network environment comprising a plurality of wireless network access devices for wireless communication with wireless clients, a method enabling a directed association scheme, comprising

scanning (paragraph 22 (active scanning)) for wireless network access devices in a wireless network environment;

selecting (paragraph 24 (adopts the BSSID and channel sync)) a wireless network access devices identified in the scanning step;

transmitting an association request (paragraph 24 (association request is issued)) to the selected wireless network access devices;

receiving an association response (paragraph 24 (association response)) from the selected wireless network access devices, wherein the association response denies



Art Unit: 2609

the association request (abstract (allowing association with other access points); paragraph 30, lines (some access points are excluded from mobile units, it will be forced to associate with other access points)) and identifies at least one allowable wireless network access devices; and

transmitting an association request (paragraph 24 (issued association request to associate with selected access point)) to one of the at least one allowable wireless network access devices.

Consider **claim 31**, and **as applied to claim 30 above**, Kostic et al. clearly disclose and show a method wherein the association request identifies the wireless s network access devices (paragraph 24 (adopts the BSSID (access point ID))) detected in the scanning step.

Consider **claim 32**, and **as applied to claim 32 above**, Kostic et al. clearly disclose and show a method further comprising storing (paragraph 32 (processor for storing access point ID)) the wireless network access devices detected in the scanning step.

Consider **claim 33**, and **as applied to claim 32 above**, Kostic et al. clearly disclose and show a method wherein the wireless network access devices are access points (paragraph 24 (access point)).

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 2609

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 6, 9, 11, 16, 19 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Whelan et al. (U.S. Patent Publication # 20040198220)**, in view of **Kostic et al. (U.S. Patent Publication # 20030139197)**.

Consider **claims 6 and 28**, and as applied to **claims 4 and 27** above, respectively, Whelan et al. clearly disclose the apparatus as described. However, Whelan et al. do not specifically disclose the operating channel in the response.

Furthermore, Kostic et al. clearly disclose, in the association response, the current operating channel (paragraph 30 (frequency option information in capability information which is the same for association request and response)) association with the at least one wireless network access device.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the operating channel in the response, as taught by Kostic et al., so that the mobile unit can associate correctly with an access point.

Consider **claims 9 and 19**, and **as applied to claims 8 and 18 above**, respectively, Whelan et al. clearly disclose and show an apparatus wherein the apparatus is further operative to compare the wireless network access device detected by the wireless client to the set of allowable wireless network access devices (fig. 2a (54)).

However, Whelan et al. do not specifically disclose the access point ID in the association response.

In the same field of endeavor, Kostic et al. clearly shows disclose the association response includes the at least one allowable wireless network access device that was detected by the wireless client (paragraph 24, paragraph 25, table 5 (3 Association ID)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the access point id, as taught by Kostic et al., so that the mobile unit can associate correctly with an access point.

Consider **claim 11**, and **as applied to claim 1 above**, Whelan et al. clearly disclose and show an apparatus as described.

However, Whelan et al. do not specifically disclose a probe request and response. In the same field of endeavor, Kostic et al. clearly disclose:

the wireless client transmit probe requests (paragraph 22 (probe request)) to wireless network access devices, and wherein the apparatus is operative to receive

from wireless network access devices in the wireless network system indications (paragraph 22 (probe response)) that the wireless network access devices detected the probe requests of the wireless client.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the access point id, as taught by Kostic et al., so that the mobile unit can associate correctly with an access point.

**Claims 7, 17 & 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Whelan et al. (U.S. Patent Publication # 20040198220)**, in view of **Islam et al. (U.S. Patent Publication # 20040103194)**.

Consider **claims 7, 17 and 29**, and as applied to **claims 1, 12 and 25** above, respectively, Whelan et al. clearly disclose the apparatus as described.

However, Whelan et al. do not specifically disclose the using of a load balancing algorithm.

In addition, Islam et al. clearly disclose the use of load balancing in associating a mobile unit with an access point (paragraph 48 (load balancing algorithm)).

Therefore it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the use of load balancing, as taught by Islam et al., so that the mobile unit can associate correctly with an access point.

Consider **claims 16, and as applied to claim 14 above**, Whelan et al. clearly disclose the apparatus as described. However, Whelan et al. do not specifically disclose the operating channel in the response.

Furthermore, Kostic et al. clearly disclose, in the association response, the current operating channel (paragraph 30 (frequency option information in capability information which is the same for association request and response)) association with the at least one wireless network access device.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the operating channel in the response, as taught by

**Claims 10 and 20-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Whelan et al. (U.S. Patent Publication # 20040198220)**, in view of **Islam et al. (U.S. Patent Publication # 20040103194)**, and further in view of **Kostic et al. (U.S. Patent Publication # 20030139197)**.

Consider **claims 10 and 20, and as applied to claim 7 and 17 above, respectively**, Whelan et al., as modified by Islam et al., clearly disclose the apparatus as described.

However, Whelan et al., as modified by Islam et al., do not specifically disclose exchange of load data. Furthermore, Kostic et al., clearly disclose and show an apparatus wherein the apparatus is operative to exchange load data with other apparatuses (paragraph 8 (handoffs)) in the wireless network system.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the load data exchange, as taught by Kostic et al., so that the mobile unit can associate correctly with an access point.

Consider **claims 21 and 22, and as applied to claim 20 above**, Whelan et al., as modified by Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by Islam et al., do not specifically disclose the content of the load data. In addition, Kostic et al., clearly disclose the load data contains the number of remote client elements (paragraphs 7 & 8 (loading level information); paragraph 17 (number of associated stations)) and data throughput (paragraph 17 (traffic intensity)) to the access elements.

Therefore it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

Consider **claims 23**, and **as applied to claim 20 above**, Whelan et al., as modified by Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by Islam et al., do not specifically disclose the probe request by the access elements. In the same field of endeavor, Kostic et al. clearly disclose the sending of probe request by access elements (paragraph 22 (probe request)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

Consider **claims 24**, and **as applied to claim 23 above**, Whelan et al., as modified by Islam et al., clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al., as modified by Islam et al., do not specifically disclose the association response. In the same field of endeavor, Kostic et al. clearly disclose the comparison of the identified access elements detecting the probe requests of the



Art Unit: 2609

wireless client to the set of allowable access elements, and wherein the association response includes at least one allowable access element that also detected probe requests of the wireless client (paragraph 24, paragraph 25, table 5 (3 Association ID)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and identify the load data, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

**Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Whelan et al. (U.S. Patent Publication # 20040198220)**, in view of **Hawkins et al. (U.S. Patent # 7025209)**.

Consider **claim 13**, and **as applied to claim 12 above**, Whelan et al. clearly disclose and show a wireless network system enabling a directed association mechanism as described.

However, Whelan et al. do not specifically disclose the tunnel with access elements. Furthermore, Hawkins clearly disclose the tunnel (fig. 5(430 (tunneler)), column 17, lines 57-67, column 18, lines 1-26 (tunnel connects wireless client and proxy server)) with access elements.

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the tunnel with access elements, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

**Claim 34** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kostic et al. (U.S. Patent Publication # 20030139197)**, in view of **Whelan et al. (U.S. Patent Publication # 20040198220)**.

Consider **claim 34**, and **as applied to claim 30 above**, Kostic et al. as modified by Whelan et al., clearly disclose and show the method as described.

However Kostic et al. do not specifically disclose protocol information.

Furthermore, Whelan et al., clearly disclose access elements in a wireless network system including hierarchical processing of protocol information (paragraph 4 (ESS (extended service set) protocol)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a wireless network apparatus, as taught by Whelan et al., and demonstrate the tunnel with access elements, as taught by Hawkins, so that the mobile unit can associate correctly with an access point.

***Conclusion***

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2609

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

**Sai-Ming Chan**  
S.C./sc



June 26, 2007

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